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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

ELPENORD, CANDAL

ART UNIT	PAPER NUMBER
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2609

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/730,390

Applicant(s)

MELVIN ET AL.

Examiner

Candal Elpenord

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003. **DANG T. TON**
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final. **SUPERVISORY PATENT EXAMINER**
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12/08/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 3-5** are objected to under 37 C.F.R. 1.75 for the following informalities:

Claim 3, the term "the destination port" recited in line 4. It is suggested to applicant to remove or change "the destination port" to ---a destination port. Similar problems exist in **claim 4** line 4

Claim 5 is objected to since it depends on claim 4.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 8-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8, the occurrence of the term "the communication packet" recited in line 4 and 6 has no antecedent basis. Similar problem exists in **claim 9** line 6 and 8.

Claim Rejections - 35 USC § 101

Double Patenting

4. **Claim 2** is rejected under 35 U.S.C. 101 as claiming the same invention as that of **claim 1** of prior U.S. Patent No. (US 6,697,330 B1). This is a double patenting rejection.

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or

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discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 2 is identical to of claim 1 of Patent Number.(US
6,697,330 B1)

Claim Rejections - 35 USC § 103

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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7. **Claim 1** is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claim1** of **U.S. Patent No. 6,697,330 B1**.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

For claim 1, claim 1 of patent number 6,697,330 B1 discloses a method for initiating flow control in a network multiplexer that forwards a message descriptor referencing a communications packet received by a receiving port to one or more transmit queues, each transmit queues, each transmit queue associated with a transmitting port which transmits communication packets queued to the transmit queue, the method comprising:

(a) providing each transmitting port in the network multiplexer with a high threshold and a low threshold;

(b) when a message descriptor is queued to a transmit queue associated with a transmitting port, and

(c) when the transmit queue currently contains a maximum number of message descriptors, discarding the message descriptor, and

(d) when the transmit queue currently contains a number of message descriptors equal to or greater than the high threshold of the associated transmitting port sending a flow control request to the receiving port that received the communications packet referenced by the queued message descriptor.

Applicant 's claim 1 merely broaden the scope of patent number 6,697,330 claim 1 by eliminating the elements "when a message descriptor is queued to a transmitting

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queue associated with a transmitting port”, and “when the transmit queue currently contains a number of message descriptors greater than or equal to the low threshold of the associated transmitting port, but the number of message descriptors contained in the transmit queue exceeded or equaled the high threshold of the associated transmitting port more recently than the number of message descriptors contained in the transmit queue was equal to the low threshold of the associated transmitting port, sending a flow control request to the receiving port that received the communications packet referenced by the queued message descriptor” from claim 1 of the patent. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 186 USPQ 375 (bd. App. 1969); omission of a reference element whose function is not needed would have been obvious to one skilled in the art.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. **Claims 1-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Clayton et al. (US 6,785,442 B1)** in view of **Janoska et al. (US 6,539,024 B1)**.

For claims 1 and 10, **Clayton et al. (US 6,785,442 B1)** discloses a method for initiating flow control (see **Fig.2 box 33**) in a network multiplexer (See **Fig. 5 boxes 84 & 83**) that forward a message descriptor referencing a communications packet (See **column 13 line 53-59**) received by a receiving port to one or more transmit queues (**Fig. 2 box 50**), each transmit queue associated with a transmitting port which transmits communication packets queued to the transmit queue (see **column 9 line 52-55**), the method comprising:

(a) providing each transmitting port in the network multiplexer with a high threshold (see **column 11 line 63-68**) and a low threshold (see **column 11 line 53-59**)

(b) when a message descriptor is queued to a transmit queue associated with a transmitting port (see **column 10 line 9-14**),

(d) when the transmit queue currently contains a number of message descriptors equal to or greater than the high threshold of the associated transmitting port sending a flow control request to the receiving port that received the communications packet referenced by the queued message descriptor(see **column 11 line 63-69**)

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For claims 2 and 4, Clayton et al. discloses a method when a message descriptor is queued to a transmit queue associated with a transmitting port (**see column 9 line 63-69**),

(a) when the transmit queue currently contains a number of message descriptors greater than or equal to the low threshold of the associated transmitting port, but the number of message descriptors contained in the transmit queue exceeded or equaled high threshold of the associated transmitting port more recently than the number of message descriptors contained in the transmit queue was equal to the low threshold of the associated transmitting port, sending a flow control request to the receiving port that received the communications packet referenced by the queued message descriptor (**see column 26 line 13-23**)

For claims 3 and 8, Clayton et al. discloses a method when a transmitting port transmits a packet referenced by a message descriptor,

(a) releasing a message descriptor, and when the destination port currently contains a number of queued message descriptors equal to one less than the destination port's low threshold, sending a release flow control request to any receiving ports to which a flow control request was sent while the transmit queue contained a number of message descriptors equal to or greater than the high threshold of the associated transmitting port (**see column 12 line 3-11**).

For claim 4 and 9, Clayton et al. discloses a method when a transmitting port transmits a packet referenced by a message descriptor,

(a) releasing the message descriptor, and when the destination port currently contains a number of queued message descriptors one less than the destination port's low threshold, sending a release flow control request (**see column 13 line 11-16**) to any receiving ports to which a flow control request was sent while the transmit queue contained a number of message descriptors greater than or equal to the low threshold of the associated transmitting port (**see column line 12 line 26-30**).

For claim 5 and 10, Clayton et al. discloses a method when a receiving port is flow controlled (**see column 11 line 5-14**) and receives a number of release flow control requests equal to the number of received flow control requests, releasing flow control by the receiving port (**see column 11 line 53-61**).

Clayton et al. teaches all the limitations with the exception of discarding the message descriptors when the transmit queue currently contains a maximum number of message descriptors. However, **Janoska et al.** from the same field of endeavor for **claims 1 and & 7**, discloses a method whereby the message descriptors are discarded when the transmit queue contains a maximum number of message descriptors (**see column 8 line 46-54**), discarding the message descriptor (**see column 8 line 55-65**). Therefore, it would have been obvious to a person of ordinary in the art at the time the invention was made to incorporate the method of initiating selective flow control as taught by **Clayton et.** into the network method and apparatus of **Janoska et al.** to produce selective flow control. The discarding mechanism as taught by **Janoska et al.** can combined /implemented to include the methods of flow control request and releasing flow request by programming or setting threshold levels within a transmitting

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queue in a network multiplexer /scheduler. The motivation being that it provides a fair utilization of network resources and prevents the possibility of congestion occurrence.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **Daines et al.** (US 6,192,422 B1), **Chong et al.** (US 6,724,767 B1) and **Erimli et al.** (US 6,405,258 B1) are cited to show methods and apparatus for initiating flow control in network.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CE



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SUPERVISORY PATENT EXAMINER